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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,810	03/23/2004	David I. Suda	D0932-00444	2913
8933	7590	11/01/2006	EXAMINER	
DUANE MORRIS, LLP IP DEPARTMENT 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103-4196			YAO, SAMCHUAN CUA	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,810

Applicant(s)

SUDA ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8,9,12,15,16,36 and 41-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8,9,12,15,16,36 and 41-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-5, 8-9, 12, 36, 43-45, and 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier et al (US 5,169,700).

With respect to claims 1 and 36, Meier et al discloses a faced fiber glass insulating blanket for aircraft hulls, the blanket comprises a pair of resin-impregnated fiber-glass insulating batts (46); a 1st pair of porous non-woven webs (38) between and contiguous to the fiber-glass insulating batts; and a 2nd pair of porous non-woven webs (54); wherein these non-woven webs (38, 54) extending beyond the batts and "are attached to each other as by heat-sealing" them together along the peripheral portion of the major surfaces of each of the webs "to form a bonded flange (62) ...", thereby bonding the insulating batts together; wherein the non-woven web comprises inorganic fibers having a flame retardant characteristic and further wherein non-woven web is "*strong, tear resistant and lightweight*" (col. 1 lines 6-68; col. 3 lines 23-59; col. 4 lines 32-65; col. 5 lines 15-38; figure 7). Moreover, while not explicitly disclosed, it is understood that the inorganic non-woven web in Meier et al is taken to comprise randomly oriented inorganic fibers. In any event, such would have been obvious

in the art, because air-laid inorganic fibers is an art recognized effective and convenient way for making air-permeable non-woven web.

Meier et al does not teach using glass fibers for the inorganic non-woven web.

However, it would have been obvious in the art to use fiber glass in forming the

inorganic non-woven web suggested by Meier et al, because: a) it is desired in

Meier et al to form an insulating blanket for aircraft, which has an improved

"tensile strength" without impairing its insulating ability and without adding

significantly to its cost or weight" (col. 1 lines 64-68); and b) glass fibers are

relatively low cost and readily available inorganic fibers commonly known in the

art for having a good flame retardant and thermal insulating characteristics and

for providing an excellent strength to weight ratio to a finished non-woven web.

As for the recited relative thickness between insulating layers and a porous non-woven web, see figures 1-7 of the Meier et al patent.

With respect to claims 3-5 and 8, see inorganic nonwoven web layers (38) in figures 4 and 6-7 of the Meier et al patent.

With respect to claim 9, the R-values recited in this claim are typical R-values for insulating batts. One in the art would have chosen a desired R-value for the desired end-use of a finished insulating batt.

With respect to claim 12, while Meier et al teaches using an oven to cure a resin binder, Meier et al is silent on the curing temperature of the resin. However, resin binders, which are suitable for binding glass fibers and have the recited curing temperature are well known and conventional in the art. Since it is well within the

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purview of choice in the art choose from among well known resin binders for glass fibers in the art, this claim would have been obvious in the art. Note: the melting range of typical glass fibers is significantly higher 600 °F.

With respect to claim 43, see column 2 lines 5-14.

With respect to claims 44-45 and 47-48, while not explicitly stated, since the non-woven webs are only heat-sealed along the peripheral portion of the major surface of each of the webs, it must be separable to a certain extent by hand from each other. Alternatively and additionally, each of the batts illustrated in figure 6 are separable from each other. All that would have been needed is to cut/rip each of the wrapping films (56) along an interface between contiguous non-woven webs (38, 54). As for claims 47-48, see column 4 lines 9-44 and figures 1 and 8. It directly follows that, since as noted above the non-woven webs are bonded together along the peripheral portion only, it must have a weaker bond than the bonding between a nonwoven web and an insulating fibrous batt. With respect to claim 46, the thickness recited in this claim is an art recognized thickness for a facing layer of a fibrous batt. Additionally, one in the art would have determined a suitable facing layer thickness for a desired properties of a finished encapsulated batt. For this reason, this claim would have been obvious in the art.

With respect to claims 49-51, the limitations in these claims are substantially mere repetition of the limitations in the above recited claims, for the same reasons set forth above, the repeated limitations would have been obvious in the

art. While it is acknowledged that the inorganic non-woven web is not characterized by Meier et al as a non-woven tissue as recited in claim 1, nonetheless the term (i.e. tissue) is taken to read on a non-woven web, because applicant fails to positively define this term, and this term is defined broadly in Webster's New Collegiate Dictionary 2nd edition as simply "*a web*". As for the added limitation in claims 49 and 51, as noted above, it is desired in Meier to use a non-woven web which is "*strong, tear resistant and lightweight*" (col. 5 lines 15-38), and discloses that the facing sheet "*improves the tensile strength of the insulation product and increases its stiffness*" (col. 2 lines 20-23). Moreover, since the fibers in an insulation fibrous batt are not strongly bonded (in fact, the batt would tear readily by application manual tensile force), the nonwoven web must naturally have a tensile strength, which is greater than the tensile strength of the batt. Moreover, see column 2 lines 5-21 for the recited batt thickness. As for the thickness of a reinforcing tissue web, Meier et al also teaches a film to encase an insulating batt. The recited thickness is typical in the art for a film. The teachings of Meier et al would have reasonably suggested to one in the art that the thickness of a nonwoven facing web would not significantly deviate from the thickness of a covering film. For these reasons, claim 50 would have been obvious in the art.

3. Claims 15-16 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier et al (US 5,169,700) as applied to claim 1 or 36 above, and further in view of Knapp et al (US 5,848,509).

Since Knapp et al, drawn to making an encapsulated insulating batt, teaches bonding a covering nonwoven web on a 1st major surface of an insulating batt and for bonding a kraft paper onto a 2nd major surface of the batt using a bituminous material (col. 3 line 38 to col. 4 line 13; figures 3-4) in order to retard moisture into the fibrous insulating layer thereby preventing the degradation of the fibers in the insulating layer.

Response to Arguments

4. Applicant's arguments filed 09-14-06 have been fully considered but they are not persuasive.

Counsel's arguments on pages 7-9, particularly the argument on page 8 full paragraph 1 are found to be persuasive. For this reason, Examiner has withdrawn the 112 1st paragraph rejection.

On page 10, Counsel argued that claim 1 has been amended to require a reinforcing layer "is bonded to a major surface of both of first and second insulation layers and that in this manner the reinforcing layer acts to also bond the insulation layers together along the major surfaces. Examiner agrees.

However, as noted above, in an alternative embodiment of Meier et al illustrated in figure 7, each of the nonwoven webs (38) is bonded to each major surface of a pair of insulating batts. Additionally and further noted above, these non-woven webs extending beyond the batts and "are bonded to each other as by heat-sealing" them together along the peripheral portion of the major surfaces of each web "to form a bonded flange (62) ...", thereby bonding the insulating layers

together. Therefore, this added limitation fails to define over the embodiment illustrated in figure 7. As for Counsel's arguments regarding embodiments illustrated in figures 4 and 6, they are moot in light of a new ground of rejection, which is based on an embodiment illustrated in figure 7.

On page 11 full paragraph 1, Counsel argued "... the products of Figs 6 and 7 do not include a reinforcing layer that is "disposed between and bonded directly to a major surface of each of said insulation layers and extending long a length of said batt, said at least one reinforcing layer bonding said insulation layers together along said major surfaces"" (quotation in original) as required in claim 1.

At the outset, this limitation does not positively require a surface of a reinforcing layer to be bonded completely to the surfaces of adjacent insulating layers.

Therefore, this embraces an embodiment in figure 6, where it illustrates adjacent insulating layers are bonded together via a flange peripheral portion of each non-woven web. Note that: each of the webs is directly bonded onto a major surface of each of the adjacent insulating layers.

On page 11 last full paragraph, Counsel argued that, Meier et al does not teach using the same binder is used to bind fibers in an insulating batt and to bond a reinforcing layer onto a surface of the batt as required in claims 12 and 51.

Examiner strongly disagrees. Counsel's attention is directed to column 4 lines 28-31 of the Meier et al patent, where it clearly states: "... the curing of the binder results, not only in the fibers being bonded to one another, but in the fibers being bonded to the web 38 as well".

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As for Counsel's argument on page 12 full paragraphs 1-2 Counsel basically reiterated the same argument as above, this argument is not found to be persuasive for the same reason as above.

Conclusion

5. Note: the indicated allowability of claims 44-48 are withdrawn in view of a new ground of rejection. The rejection is based on alternative embodiment illustrated in figure 7 in Meier et al, which was not fully explored by Examiner in prior office actions.

6. Ackley (US 3,850,723), Degginger et al (US 4,098,943), and a combination of (Herreman et al (US 5,965,851) and Marzocchi et al (US 4,273,685)) are cited showing various potential prior art references to the presently claimed invention. It is suggested to consider the teachings of these references in amending the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richard Crispino can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
10-29-06